

Hurricane Juliette and Coastally Trapped Waves Along the Mexican West Coast.

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An operational real-time eddy-resolving ($1/16^\circ$) global ocean nowcast-forecast system and a hybrid coordinate numerical ocean model are used to study the evolution of two coastally trapped waves generated by Hurricane Juliette along the Mexican West Coast. Results indicate that the first wave was generated along mainland Mexico and it propagated poleward as a free coastally trapped wave; it also generated anticyclonic eddies near Cabo Corrientes and the Maria Islands. Upon entering the Gulf of California the wave weakened cyclonic eddies and after reaching the shelf break north of Guaymas, it reversed direction and propagated southward along the east coast of the Baja California Peninsula (BCP). Next, the wave generated an anticyclonic eddy at Cabo San Lucas. Finally, the wave weakened while exiting the gulf and propagated northward along the BCP West Coast. The second coastally trapped wave was generated by Juliette's poleward winds along the BCP West Coast, but was subsequently greatly weakened by Juliette's equatorward winds.